

**REMARKS**

At the outset, the Examiner is thanked for the thorough review and consideration of the subject application. The Non-Final Office Action of July 11, 2003 has been received and its contents carefully reviewed.

By this amendment, Applicant hereby amends claim 25 and respectfully submits no new matter has been added. Accordingly, claims 1-8 and 10-26 remain pending.

In the Non-Final Office Action, the Examiner objected to claim 25 due to the presence of a typographical error; rejected claims 1-8, 10-23, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over the related art shown in Figures 1 and 2 in view of Suzuki et al. (U.S. Pat. No. 5,739,880); and rejected claim 24 under 35 U.S.C. § 103(a) as being unpatentable over the related art shown in Figures 1 and 2 in view of Suzuki et al. and further in view of Kashima et al. (U.S. Pat. No. 6,504,589). The aforementioned rejections are traversed and reconsideration of the claims is respectfully requested in view of the following remarks.

Preliminarily, it is noted that claim 24 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the related art shown in Figures 1 and 2 in view of Suzuki et al. and further in view of “Kashima et al. (U.S. Pat. No. 6,504,598).” Applicant notes, however, that U.S. Pat. No. refers to a patent issued to Kitano (U.S. Pat. No. 6,504,598) while U.S. Pat. No. 6,504,589 refers to Kashima et al. For purposes of prosecution, Applicant hereby assumes the claim 24 was intended to be rejected under 35 U.S.C. § 103(a) as being unpatentable over the related art shown in Figures 1 and 2 in view of Suzuki et al. and further in view of Kashima et al. (U.S. Pat. No. 6,504,589).

Application No.: 09/394,379  
Group Art Unit: 2871  
Reply to Office Action of July 11, 2003

Docket No.: 8733.088.00  
Reply Dated October 9, 2003  
Page 9 of 16

Applicant respectfully requests the objection to claim 25, based on a typographical error, be withdrawn in view of the amendment to claim 25 above.

The rejection of claims 1-8, 10-23, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over the related art shown in Figures 1 and 2 in view of Suzuki et al. is traversed and reconsideration is respectfully requested.

Independent claim 1 is allowable over the cited art in that claim 1 recites a combination of elements including, for example, “a second substrate having first and second surfaces, wherein the first surface is disposed against the first substrate; a non-transparent film coated on a periphery of the second surface of the second substrate...; and a sheet material disposed between the light source and the second substrate, wherein at least a portion of one edge of the sheet material is not directly under the non-transparent film.”

None of the cited references including the related art shown in Figures 1 and 2 or Suzuki et al., singly or in combination, teach or suggest at least these features of the claimed invention. Accordingly, Applicant respectfully submits that claims 2-8 and 10-14, which depend from claim 1 are also allowable over the cited references.

Independent claim 15 is allowable over the cited art in that claim 15 recites a combination of elements including, for example, “providing a second substrate having first and second surfaces, wherein the first surface is disposed against the first substrate; coating a non-transparent film on a periphery of the second surface of the second substrate...; and disposing a sheet material between the light source and the second substrate, wherein at least a portion of one edge of the sheet material is not directly under the non-transparent film.”

None of the cited references including the related art shown in Figures 1 and 2 or Suzuki et al., singly or in combination, teach or suggest at least these features of the claimed invention.

Accordingly, Applicant respectfully submits that independent claims 16-23, which depend from claim 15 are also allowable over the cited references.

Independent claim 25 is allowable over the cited art in that claim 25 recites a combination of elements including, for example, “a second substrate having first and second surfaces, wherein the first surface is disposed against the first substrate; a non-transparent film coated on a periphery of the second surface of the second substrate to substantially block light emitted from the light source; and a sheet material disposed between the light source and the second substrate, wherein the non-transparent film does not overlap at least a portion of one edge of the sheet material.” None of the cited references including the related art shown in Figures 1 and 2 or Suzuki et al., singly or in combination, teach or suggest at least these features of the claimed invention. Accordingly, Applicant respectfully submits that claim 25 is allowable over the cited references.

Independent claim 26 is allowable over the cited art in that claim 26 recites a combination of elements including, for example, “providing a second substrate having first and second surfaces, wherein the first surface is disposed against the first substrate; coating a non-transparent film on a periphery of the second surface of the second substrate to substantially block light emitted from the light source; and disposing a sheet material between the light source and the second substrate, wherein the non-transparent film does not overlap at least a portion of one edge of the sheet material.” None of the cited references including the related art shown in Figures 1 and 2 or Suzuki et al., singly or in combination, teach or suggest at least these features of the claimed invention. Accordingly, Applicant respectfully submits that claim 26 is allowable over the cited references.

The Examiner cites the related art shown in Figures 1 and 2 as disclosing “(concerning claims 1 and 15) ...a sheet material (10) disposed between the light source (20) and the second substrate (6), and at least a portion of one edge (such as the right edge) of the sheet material (10) is not directly under the black pattern (24) (the non-transparent film); (concerning claims 25-26) the black pattern (24) (the non-transparent film) does not overlap at least one edge (such as the right edge) of the sheet material (10).” The Examiner then states the related art shown in Figures 1 and 2 “does not expressly disclose a non-transparent film coated on periphery of the second surface (lower surface) of the second substrate.” In attempting to cure the deficiencies of the related art shown in Figures 1 and 2, the Examiner cites Suzuki et al. as disclosing “...a liquid crystal display device having a shield tape (TAPE) is stuck to the lower face of the lower substrate (SUB1)... [and] the shield tape (TAPE) ...is coated on the periphery of the lower face of the lower substrate.” In concluding with the rejection, the Examiner states it would have been obvious to “...use a non-transparent black film coated on periphery of the lower surface of the lower substrate as claimed in claims 1, 15, 25, and 26 for preventing the light leakage from the back light and achieving an excellent display quality...”

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the references when combined. See M.P.E.P. § 2413. Applicant respectfully submits a *prima facie* case of obviousness has not been established with respect to the rejection of the aforementioned claims.

For example, the cited combination of references (i.e., related art shown in Figures 1 and 2 in view of Suzuki et al.) fails to teach or suggest at least “...a non-transparent film on a periphery of the second surface of the second substrate... [and] a sheet material between the

light source and the second substrate, wherein at least a portion of one edge of the sheet material is not directly under the non-transparent film” and “a non-transparent film coated on a periphery of the second surface of the second substrate... [and] a sheet material disposed between the light source the second substrate, wherein the non-transparent film does not overlap at least a portion of one edge of the sheet material.”

Assuming, *arguendo*, and in a manner consistent with the Examiner’s interpretation of the cited references, that (a): the related art shown in Figures 1 and 2 shows wherein the non-transparent film (24) is formed on a surface of a substrate (6) that is not disposed against another substrate (4), wherein at least a portion of the right edge of sheet material (10) is not directly under (or does not overlap) the non-transparent film (24); and (b) Figure 9 of Suzuki et al. shows a non-transparent film (TAPE) is formed on a periphery of a surface of a substrate (SUB 1) that is not disposed against another substrate (SUB 2), Applicant respectfully submits the cited combination of the related art shown in Figures 1 and 2 in view of Suzuki et al. still does not teach or suggest the claimed invention.

More specifically, while Figure 9 of Suzuki et al. shows the non-transparent film (TAPE) extending to the leftmost edge of the substrate (SUB1), Suzuki et al. also states at column 13, lines 8-11 that “...the shield tape (TAPE) is stuck through an adhesive layer to the lower face of the lower transparent glass substrate SUB 1 from the seal member SL to the end portion of the substrate SUB 1...”

Consistent with both the teaching of Suzuki et al. at column 13, lines 8-11 and at Figure 9, and with the Examiner’s interpretation of Suzuki et al., Applicant respectfully submits Suzuki et al. can reasonably be construed as teaching wherein the shield tape (TAPE) not only provided at a periphery of the lower surface of the lower transparent glass substrate

(SUB1), but also extends to the edges (end portions) along the periphery of the lower transparent glass substrate (SUB1). Without more however, Applicant respectfully submits Suzuki et al. cannot be reasonably interpreted as teaching or even suggesting wherein the shield tape (TAPE) extends only to edges along the fraction of the periphery of the lower transparent glass substrate (SUB1) actually shown in Figure 9.

In combining the related art shown in Figures 1 and 2 with Suzuki et al. to arrive at the claimed invention, Applicant respectfully submits the Examiner replaces the non-transparent film (24) of the related art shown in Figures 1 and 2 with the non-transparent film (TAPE) of Suzuki et al. By doing so, the combination of the related art shown in Figures 1 and 2 in view of Suzuki et al. is necessarily provided with a non-transparent film extending to the edge of substrate (6) along the entire periphery of substrate (6).

Referring to the related art shown in Figures 1 and 2, at page 3, lines 17-20 of the present application, "...the lower glass substrate 6 of the liquid crystal panel is formed larger than the upper glass substrate 4..." Therefore, in the structure defined by the cited combination of references (i.e., the related art shown in Figures 1 and 2 in view of Suzuki et al.), the right edge of sheet material (10), originally supplied by the related art shown in Figures 1 and 2, is necessarily arranged directly under (or overlapped by) the non-transparent film imported from Suzuki et al. Accordingly, Applicant respectfully submits the cited combination of references actually teaches away from the claimed combination of elements cited above.

Further, Applicants respectfully submit there is no suggestion, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the teachings of either the related art shown in Figures 1 and 2 or Suzuki et al. in any

manner and obtain, for example, a non-transparent film formed on a surface of a substrate that is not disposed against another substrate, wherein at least a portion of one edge of sheet material is not directly under (or is not overlapped by) the non-transparent film, as required by the aforementioned claims. Interpreting Suzuki et al. to teach or suggest that the shield tape (TAPE) extends to only a portion of the edge of the lower transparent substrate (SUB1) could only be the result of an unreasonable inference of Suzuki et al., possible only in light of the Applicant's claimed invention. Accordingly, Applicant respectfully submits the related art shown in Figures 1 and 2 has been combined with Suzuki et al. using the claimed invention as a template, without any objective reason to combine the references, via impermissible hindsight.

Accordingly, Applicant respectfully requests the withdrawal of the rejection as a *prima facie* case of obviousness has not been established.

The rejection of claim 24 under 35 U.S.C. § 103(a) as being unpatentable over the related art shown in Figures 1 and 2 in view of Suzuki et al. and further in view of Kashima et al. is traversed and reconsideration is respectfully requested.

Independent claim 24 is allowable over the cited art in that claim 24 recites a combination of elements including, for example, "a second substrate having first and second surfaces, wherein the first surface is disposed against the first substrate; ...and a sheet material disposed between the light source and the second substrate, the sheet material comprising an uppermost sub-layer having a first length and at least one underlying sub-layer arranged under the uppermost sub-layer and having a second length, wherein the first length is substantially equal to the second length." None of the cited references including the related art shown in Figures 1 and 2, Suzuki et al., or Kashima et al., singly or in

combination, teach or suggest at least these features of the claimed invention. Accordingly, Applicant respectfully submits that claim 24 is allowable over the cited references.

The Examiner cites the related art shown in Figures 1 and 2 as failing to disclose “...the sheet material comprising an uppermost sub-layer having a first length and at least one underlying sub-layer arranged under the uppermost sub-layer and having a second length, and the first length is substantially equal to the second length.” Moreover, the Examiner cites Suzuki et al. as failing to disclose “the sheet material layers have equal lengths.” In attempting to cure the deficiencies of the related art shown in Figures 1 and 2 and Suzuki et al., the Examiner cites Kashima et al. as teaching a “...conventional backlight system ...using diffusion sheet (25) ...and prism sheet (26) ...having equal lengths (see Fig. 11).” The Examiner then alleges “using equal lengths for the ...prism sheet and the diffusion sheet would be easy to manufacture and would have sufficient luminance in a high efficiency.” The Examiner concludes the rejection by stating it would have been obvious “to use equal lengths for the ...prism sheet and diffusion sheet as claimed in claim 24 for achieving sufficient luminance in a high efficiency.”

According to M.P.E.P. § 2144.02, the rationale to support a rejection under 35 U.S.C. § 103 may rely solely on logic and sound scientific principle. However, when an Examiner relies on a scientific theory, evidentiary support for the existence and meaning of that theory must be provided.

From the Examiner’s theory, it appears that providing a prism sheet and a diffusion sheet having equal lengths as taught by Kashima et al. would enable one of ordinary skill in the art to achieve “sufficient luminance in a high efficiency,” thus rendering the claimed invention obvious.

Application No.: 09/394,379  
Group Art Unit: 2871  
Reply to Office Action of July 11, 2003

Docket No.: 8733.088.00  
Reply Dated October 9, 2003  
Page 16 of 16

Applicant respectfully submits, however, evidentiary support for the existence and meaning of the Examiner's theory outlined above must be, but has not been, provided. Furthermore, Applicant respectfully submits there is no relationship between relative lengths of adjacent prism and diffusion sheets and the ability to achieve "sufficient luminance in a high efficiency," as asserted by the Examiner. In the absence of any evidentiary support, Applicant respectfully submits the related art shown in Figures 1 and 2, Suzuki et al., and Kashima et al. have merely been combined using the presently claimed invention as a template via improper hindsight reasoning.

Applicant believes the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited. Should the Examiner deem that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at (202) 496-7500.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136. Please credit any overpayment to deposit Account No. 50-0911.

Respectfully submitted,

McKENNA LONG & ALDRIDGE, LLP

Date: October 9, 2003

By   
Eric J. Nass  
Registration No.: 40,106

1900 K Street, N.W.  
Washington, D.C. 20006  
Telephone No.: (202) 496-7500  
Facsimile No.: (202) 496-7756

